

IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously Amended) A self regulating flexible heater construction for producing heat when connected to an electrical power source, comprising:
a flexible fabric substrate conformable to the shape of a contiguous flexible surface to be heated;
a layer of a positive temperature coefficient material; and
a layer of a conductive material, wherein at least one of the layers is applied to the heater in an interdigitated pattern.
2. (Original) The heater of claim 1 wherein the substrate is woven or non-woven fabric.
3. (Original) The heater of claim 1 wherein the layer of conductive material is applied to the layer of positive temperature coefficient material in an interdigitated pattern.
4. (Original) The heater of claim 1 wherein the layer of positive temperature coefficient material is applied to the layer of conductive material in an interdigitated pattern.
5. (Original) The heater of claim 1 wherein the density of the fabric is 1 to 6 ounces per square yard.
6. (Original) The heater of claim 1 wherein the PTC material is comprised of a polyolefin resin.
7. (Original) The heater of claim 1 wherein the coating of PTC material has a weight 7 to 20 lbs. per ream.

8. (Original) The heater of claim 1 wherein the positive temperature coefficient material has a surface resistivity of 2 to 10 kilo-ohms as measured by multimeter probes set 1 cm apart.

9. (Original) The heater of claim 1 wherein the positive temperature coefficient material has a surface resistivity of 3 to 8 kilo-ohms as measured by multimeter probes set 1 cm apart.

10. (Original) The heater of claim 1 wherein the conductive material is formulated from a mixture of a polymeric resin selected from the group consisting of vinyls, polyesters, acrylics and a conductive material selected from the group consisting of silver pigment, a silver coated copper pigment, or plated copper pigments.

11. (Original) The heater of claim 1 wherein the conductive material is formulated from a mixture of solvating materials selected from the group consisting of organic solvents and water based solvents and a conductive material selected from the group consisting of silver pigment, a silver coated pigment, or plated copper pigments.

12. (Original) The heater of claim 1 wherein the conductive material is constructed of conductive wires fixed within the construction by conductive glues.

13. (Previously Amended) A self regulating flexible heater construction for producing heat when connected to an electrical power source, comprising:

- a flexible fabric substrate conformable to the shape of a contiguous flexible surface to be heated;

- a layer of a positive temperature coefficient material; and

- a layer of a conductive material, wherein at least the layer of conductive material is applied to the substrate by screen printing, spraying, draw down, web printing or any other printing method capable of providing a uniform coating.

14. (Previously Amended) A self regulating flexible heater construction for producing heat when connected to an electrical power source, comprising:

a flexible fabric substrate conformable to the shape of a contiguous flexible surface to be heated;

a layer of positive temperature coefficient material;

a layer of conductive material; and

a plurality of buss bars in electrical contact with the conductive material and an electrical power source.

15. (Original) The heater of claim 14 wherein the buss bars have a width dimension and a length dimension, and wherein the width decreases over at least a portion of its length.

16. (Original) The heater of claim 14 wherein the buss bars have a width dimension and a length dimension, and wherein the width remains constant over at least a portion of its length.

17. (Original) The heater of claim 14 wherein the buss bars have a width dimension and a length dimension, and at least one void at a preselected location along its length.

18. (Original) The heater of claim 14 wherein the buss bars have a width dimension and a length dimension, and wherein the width dimension increases step-wise over at least a portion of its length.

19. (Original) The heater of claim 14 wherein the spacing of the busses varies across the heater.

20. (Original) The heater of claim 1 further comprised of an overlayer of a laminated or sewn secondary breathable woven or non-woven fabric comprised of natural or synthetic fibers which covers the heater.

21. (Currently Amended) ~~The heater of claim 20~~ A self regulating flexible heater construction for producing heat when connected to an electrical power source, comprising:

a flexible fabric substrate conformable to the shape of a contiguous flexible surface to be heated;

a layer of a positive temperature coefficient material;

a layer of a conductive material, wherein at least one of the layers is applied to the heater in an interdigitated pattern; and

an overlayer of a laminated or sewn secondary breathable woven or non-woven fabric comprised of natural or synthetic fibers which covers the heater, wherein the overlayer is an encapsulating coating, which may be a flame retardant coating, which is applied over the heater.

22. (Original) The heater of claim 1 wherein the heater is incorporated within the construction of a seat for an automobile.

23. (Previously Amended) A self regulating flexible heater construction for producing heat when connected to an electrical power source, comprising:

a flexible fabric substrate conformable to the shape of a contiguous flexible surface to be heated;

a layer of positive temperature coefficient material; and

a layer of conductive material, wherein the heater has a multiple buss design providing for high and low current settings, comprised of at least a common setting buss, a low setting buss, and a high setting buss, in which current flows from either the common setting buss to high setting buss or from the common setting buss to low setting buss.

24. (Previously Amended) A self regulating flexible heater construction for producing heat when connected to an electrical power source, comprising:

a flexible fabric substrate conformable to the shape of a contiguous flexible surface to be heated;

a layer of a positive temperature coefficient material; and

a layer of a conductive material, wherein the fabric construction has a bulk density of about 0.6 g/cm^3 or greater and a thermal diffusivity of about $0.003 \text{ cm}^2/\text{s}$ or greater.